

**SAF-RC-001**  
**Industrial Hygiene Sampling**  
**FINAL DATA**

**NO DISTRIBUTION REQUIRED**

**COMMENTS:**

SDG 06I-0423-01 SAF-RC-001

Rad only    ☒ Chem only    Rad & Chem

☒ Complete    Partial

**300 Area 333 Bldg**

**RECEIVED**  
MAR 29 2006  
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## Cover Page

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Report Identification Number: 06I-0423-01  
Subcontract Number: 0000X-BO-G0058-B-Mod#4  
Name of Industrial Hygienist: Denise Pitts / Henry Ruby  
Laboratory Identification Number: DCHM  
SAF#: RC-001 / r37120 2000  
Payroll#: 72520

### Sample Information

Sample Date	Customer Sample Number	Laboratory Sample Number	Method	Analytical Batch Identification	Sample Matrix
01 Feb 2006	J113B4	06I03387	NMAM 7300M	G061200Y	MCE
01 Feb 2006	J113B5	06I03388	NMAM 7300M	G061200Y	MCE
01 Feb 2006	J113C6	06I03389	NMAM 7300M	G061200Y	MCE
01 Feb 2006	J113C7	06I03390	NMAM 7300M	G061200Y	MCE
01 Feb 2006	J113B6	06I03391	NMAM 7300M	G061200Y	MCE
01 Feb 2006	J113B7	06I03392	NMAM 7300M	G061200Y	MCE

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Name: Joanna C. Sanchez  
Title: Chemist  
Date: February 06, 2006



## Case Narrative Page

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Report Identification Number: 06I-0423-01

Subcontract Number: 0000X-BO-G0058-B-Mod#4

Name of Industrial Hygienist: Denise Pitts / Henry Ruby

Laboratory Identification Number: DCHM

SAF#: RC-001 / r37120 2000

Payroll#: 72520

**General Set Information:** There are 6 samples in set 06I-0423-01 which were analyzed for beryllium, lead and cadmium on MCE filter. No problems were encountered with the receipt of these samples and no contact with the CTR was required.

**Method Summary:** Samples were transferred to 50 ml centrifuge tubes and digested in the presence of 10 mL of 1:1 (v/v) nitric acid. Samples were digested in a hot block set at 110°C for 40 minutes. Samples were then diluted to a 25 mL volume with ASTM Type II Water. Samples were shaken and delivered for ICP analysis.

**Sample Preparation:** All samples were prepared in accordance with DCL SOP "IH-AN-021" and NIOSH method NMAM 7300 modified for hot block digestion.

**Holding Times:** The holding times were met for both sample preparation and analysis.

**Instrument Calibration:** Instrument calibration was performed in accordance with NIOSH method NMAM 7300.

**Initial and Continuing Calibration Verification Analysis:** Beryllium, cadmium and lead recoveries in all Initial Calibration Verification (ICV) and Continuing Calibration Verification (CCV) samples are within the quality control limits of +/- 10%.

**Initial and Continuing Calibration Blank Analysis:** No beryllium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.01 ug/sample. No cadmium results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 0.08 ug/sample. No lead results were found in the Initial Calibration Blank (ICB) or Continuing Calibration Blanks (CCB) at levels above the Limit of Quantitation (LOQ) of 1. ug/sample.

**Method Blank Analysis:** No beryllium, cadmium or lead was found in the media blank sample above the Contract Required Detection Limit (CRDL).

**Dilution(s):** NA.

**Laboratory Control Sample and Duplicate Analysis:** One Laboratory Control Sample (LCS) and one Laboratory Control Sample Duplicate (LCSD) were prepared and analyzed with the sample batch. The LCS result was within the control limit of +/- 20%. The Relative Percent Differences (RPD) between the LCS and the LCSD was within the control limit of 20%.

**Replicate Analysis:** One sample was replicated with this analysis run. The RPD between the sample and the replicate was within the control limit of 20%. If the result of the sample or replicate is below the CRDL, replicate analysis is negligible.

**Flagging Codes:** None

**Nonconformance/Corrective Action Report (NC/CAR):** N/A

**Sample Calculation:** The final results are calculated by the following equation:

Final result for aqueous samples ( $\mu\text{g}/\text{sample}$ ) = (A) x (B) x (C)

Where:

A = Analyte concentration from instrument determination ( $\mu\text{g}/\text{L}$ )

B = Concentration factor from sample preparation  
= Final Volume of Digestate (L)

Sample

C = Dilution performed at time of analysis

Example Calculation:  $(1 \mu\text{g}/\text{L}) \times (0.025 \text{ L}/\text{sample}) \times (1) = 0.025 \mu\text{g}/\text{sample}$

**Miscellaneous Comments:** None.



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Report Identification Number: 06I-0423-01  
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 Name of Industrial Hygienist: Denise Pitts / Henry Ruby  
 Laboratory Identification Number: DCHM  
 SAF#: RC-001 / r37120 2000  
 Payroll#: 72520

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Beryllium µg/sample		Beryllium µg/m³		Air Volume L	
J113B4	06I03387	03 Feb 2006	<0.01	U	<0.047	U	211.	
J113B5	06I03388	03 Feb 2006	<0.01	U	<0.024	U	410.	
J113C6	06I03389	03 Feb 2006	<0.01	U	<0.027	U	367.	
J113C7	06I03390	03 Feb 2006	<0.01	U	<0.026	U	378.	
J113B6	06I03391	03 Feb 2006	<0.01	U	**		**	
J113B7	06I03392	03 Feb 2006	<0.01	U	**		**	
Limit of Detection (LOD)			0.01					
Required Detection Limit (RDL)								

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Lead µg/sample		Lead µg/m³		Cadmium µg/sample	
J113B4	06I03387	03 Feb 2006	<1.	U	<4.7	U	<0.08	U
J113B5	06I03388	03 Feb 2006	<1.	U	<2.4	U	<0.08	U
J113C6	06I03389	03 Feb 2006	1.1		2.9		<0.08	U
J113C7	06I03390	03 Feb 2006	<1.	U	<2.6	U	<0.08	U
J113B6	06I03391	03 Feb 2006	<1.	U	**		<0.08	U
J113B7	06I03392	03 Feb 2006	<1.	U	**		<0.08	U
Limit of Detection (LOD)			1.				0.08	
Required Detection Limit (RDL)								

Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cadmium µg/m³	
J113B4	06I03387	03 Feb 2006	<0.38	U
J113B5	06I03388	03 Feb 2006	<0.20	U
J113C6	06I03389	03 Feb 2006	<0.22	U
J113C7	06I03390	03 Feb 2006	<0.21	U
J113B6	06I03391	03 Feb 2006	**	
J113B7	06I03392	03 Feb 2006	**	



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Customer Sample Number	Laboratory Sample Number	Date Analyzed	Cadmium $\mu\text{g}/\text{m}^3$
Limit of Detection (LOD)			
Required Detection Limit (RDL)			

U - Parameter not detected above LOD.

J - Parameter between LOD and RDL.



## QC Summary Page

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Report Identification Number: 06I-0423-01  
Subcontract Number: 0000X-BO-G0058-B-Mod#4  
Name of Industrial Hygienist: Denise Pitts / Henry Ruby  
Laboratory Identification Number: DCHM  
SAF: RC-001 / r37120 2000  
Payroll#: 72520

Batch ID: G061200Y

QC Sample ID	QC Type	Analyte	Units	Result	Parent Result	Target	Percent Rec.	Relative Percent Diff.
BL-240883-1	MB	Beryllium	µg/sample	ND	NA	NA	NA	NA
BL-240883-1	MB	Lead	µg/sample	ND	NA	NA	NA	NA
BL-240883-1	MB	Cadmium	µg/sample	ND	NA	NA	NA	NA
QC-240883-1	LCS	Beryllium	µg/sample	10.8	NA	10.0	108.	NA
QC-240883-1	LCS	Lead	µg/sample	106.	NA	100.	106.	NA
QC-240883-1	LCS	Cadmium	µg/sample	33.8	NA	30.0	113.	NA
QD-240883-1	LCSD	Beryllium	µg/sample	10.9	10.8	10.0	109.	1.46
QD-240883-1	LCSD	Lead	µg/sample	107.	106.	100.	107.	0.845
QD-240883-1	LCSD	Cadmium	µg/sample	34.3	33.8	30.0	114.	1.48

MB - Method Blank

LCS - Laboratory Control Sample

LCSD - Laboratory Control Sample Duplicate

MS - Matrix Spike

MSD - Matrix Spike Duplicate

LD - Laboratory Duplicate

NA - Not Applicable

ND - Parameter not detected above LOD

$LCS, LCSD \text{ Percent Rec.} = (\text{Result} / \text{Target}) * 100.0$

$MS, MSD \text{ Percent Rec.} = ((\text{Result} - \text{Parent}) / \text{Target}) * 100.0$

$LCS, LCSD \text{ Relative Percent Diff.} = ( (|\text{LCS} - \text{LCSD}|) / ((\text{LCS} + \text{LCSD})/2.0) ) * 100.$

$MS, MSD \text{ Relative Percent Diff.} = ( (|\text{MS} - \text{MSD}|) / ((\text{MS} + \text{MSD})/2.0) ) * 100.$

$LD \text{ Relative Percent Diff.} = ( (|\text{Parent} - \text{LD}|) / ((\text{Parent} + \text{LD})/2.0) ) * 100$

06T-04230

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST											
Collector:		Company Contact:		Telephone No.:		Project Coordinator:		Data Turnaround:			
C.S. Williams		Dennis A. Pitts and Henry W. Ruby		531-1229		James H. Kestner		24 hrs			
Payroll #:		Sampling Location:		SPECIAL INSTRUCTIONS:		SAF No.:		Method of Shipment:			
72520		300 ana/333 B106		All relevant COAs must be provided. 1371208 2008		RC-001		Fed Ex			
Type of Sample:		Wipe Sample Media:		ANALYSIS METHOD (SPECIFIC):		Bill of Lading/Air Bill No.:					
Personal		Client <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		NIOSH 7900		8544 9435 4726					
Shipped to:		Matrix:		Preservation (i.e., cooling required, etc.)							
DataChem		A - AIR W1 - WIPE X - OTHER									
Salt Lake City UT											
Special Handling and/or Storage:											
Belad/Pb											
N/A											
SAMPLE ANALYSIS											
SAMPLE NO.	MATRIX	SAMPLE DATE	VOLUME (L) or Area (sq. ft.)	Comments	No	No	No	No	No	No	No
J11384	A	2-1-06	211	06T03387	X	X	X	X	X	X	X
J11385	A	2-1-06	410	88	X	X	X	X	X	X	X
J11386	A	2-1-06	367	89	X	X	X	X	X	X	X
J11387	A	2-1-06	378	90	X	X	X	X	X	X	X
J11388	A	2-1-06	N/A	91	X	X	X	X	X	X	X
J11389	A	2-1-06	N/A	92	X	X	X	X	X	X	X
J11390	A	2-1-06	N/A	93	X	X	X	X	X	X	X
J11391	A	2-1-06	N/A	94	X	X	X	X	X	X	X
J11392	A	2-1-06	N/A	95	X	X	X	X	X	X	X
J11393	A	2-1-06	N/A	96	X	X	X	X	X	X	X
J11394	A	2-1-06	N/A	97	X	X	X	X	X	X	X
J11395	A	2-1-06	N/A	98	X	X	X	X	X	X	X
J11396	A	2-1-06	N/A	99	X	X	X	X	X	X	X
J11397	A	2-1-06	N/A	100	X	X	X	X	X	X	X

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WCH-SH-202 (08/29/2005)



Web Page: [www.datachem.com](http://www.datachem.com)  
E-mail: [lab@datachem.com](mailto:lab@datachem.com)



Enter on line below the first Sample Number from Page One:

J113B4

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST			
SIGN / PRINT NAMES / USE MILITARY TIME			
Relinquished By/Store	DATE / TIME	Received By/Store	DATE / TIME
Cynthia Williams / Cynthia Williams	2-1-06 / 11630	3746 Bldg Rm 116 locked cabinet	2-1-06 / 11630
Relinquished By/Store	DATE / TIME	Received By/Store	DATE / TIME
locked cabinet bldg 3746 Rm 116			
Goldie Mathan	02-02-06 1500	RZ Steffler R.Z. Steffler	2-2-06 / 1500
Relinquished By/Store	DATE / TIME	Received By/Store	DATE / TIME
RZ Steffler R.Z. Steffler	2-2-06 / 1600	Fed Ex	
Relinquished By/Store	DATE / TIME	Received By/Store	DATE / TIME
Relinquished By/Store	DATE / TIME	Received By/Store	DATE / TIME
Relinquished By/Store	DATE / TIME	Received By/Store	DATE / TIME
Relinquished By/Store	DATE / TIME	Received By/Store	DATE / TIME
Relinquished By/Store	DATE / TIME	Received By/Store	DATE / TIME
Relinquished By/Store	DATE / TIME	Received By/Store	DATE / TIME
LABORATORY SECTION	Received By	Title	DATE / TIME

REVIEWED BY:

DATE:

PRINT/SIGN NAME